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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/089,735

04/04/2002

Guenther Mueller

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12/29/2004

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EXAMINER

GARBER, CHARLES D

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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DEC 29 2004

GROUP 2800

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Application Number: 10/089,735  
Filing Date: April 04, 2002  
Appellant(s): MUELLER ET AL.

GROUP 2800

DEC 29 2004

MAILED

EADS Deutschland GmbH, 81663 München, Germany  
For Appellant

EXAMINER'S ANSWER

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This is in response to the appeal brief filed 10/19/2004.

**(1) *Real Party in Interest***

EADS Deutschland GmbH, 81663 München, Germany

**(2) *Related Appeals and Interferences***

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The rejection of claims 1-5 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

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**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

Takashi et al., Japanese Patent Application Publication Number 05-049097 of 26 February 1993.

Barham, R.G., "The NPL Laser Pistonphone", Journal of Low Frequency Noise and Vibration, Vol. 12, No. 2, 1993.

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (JP405049097 English language abstract only provided by Applicant as IDS document AK) in view of Barham ("The NPL Laser Pistonphone" provided by Applicant as IDS document AR). This rejection is set forth in a prior Office Action, mailed on 03/19/2004.

**(11) Response to Argument**

Appellants argue (page 5 lines 5-11) that "there is no showing in Takashi of a high pressure adapter 'connected to an output of the pistonphone volume' which includes a tube formed as a  $\lambda/4$  resonator having a length adapted to the excitation frequency of the pistonphone" nor "amplifier adapter" having "an expanded opening for sound proof connection to the microphone to be calibrated because the microphone of Takashi is directly connected to the pressure chamber 3."

According to claim 1 of the instant invention:

- a high pressure adapter is connected to an output of the pistonphone volume and a high-pressure adapter includes:

- tube formed as a  $\lambda/4$  resonator having a length adapted to the excitation frequency of the pistonphone to amplify the sound pressure produced in the pistonphone volume

- an expanded adapter opening with a sealing ring for a soundproof connection to said sound pressure level sensor to be calibrated.

Examiner maintains that Takashi in the figure shows a chamber 3 that generally includes the enclosed space within the body 2 and 1. The portion of this space within item 2 including the space within hole 13 may be considered to be a tube and will form a quarter wave resonator for certain frequencies depending upon the axial position of the body 2 within the body 1. A resonator is simply a hollow chamber or cavity with dimensions chosen to permit internal resonant oscillation of electromagnetic or acoustical waves of specific frequencies according to the The American Heritage Dictionary of the English Language and the chamber shown in the figure fits within this definition. Below the hole 13 shown in the figure is a microphone mount 12 which is shown to be an opening expanded or increased in size from the hole 13. Air-tightness member 15 is shown in the figure within the hole 13 and is therefore considered to be substantively equivalent to an expanded adapter opening with a sealing ring as in the instant invention. The mount also serves the same intended use of providing a pressure tight and therefore to some degree a soundproof connection to microphone M which is a pressure level sensor to be calibrated (see English language abstract). As

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Examiner previously responded, it has been held that the recitation than an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. In this case the axial length of the chamber 3 (along with hole 13) is effectively the proper quarter wave length for "the excitation frequency of the pistonphone to amplify the sound pressure produced in the pistonphone volume" depending on a range of frequencies that may be chosen. Takashi does not inherently or expressly place any limits on the frequencies that may be chosen and furthermore the instant invention does not positively define what frequencies are required so the reference is certainly able to perform the intended function of amplifying frequencies within some range. Appellant's assertion that the features of the high-pressure adapter where not disclosed in the Takashi reference "because the microphone of Takashi is directly connected to the pressure chamber 3" is not a compelling argument because Examiner has shown where all the limitations are taught. The directness or indirectness of the connection is not considered by the Examiner to be substantively relevant.

Appellants also allege that Examiner in the final rejection indicated "that the chamber 3 of Takashi is a high pressure adapter." Examiner made no such expressed indication but this is partly implied as will be discussed below

Appellants goes on to argue (page 5 lines 12-22) the pistonphone of the present invention is claimed as having an adjustable volume and a piston while the high pressure adapter is claimed as being connected to the output of the volume and that these feature, their interconnections and their operation are not shown in Takashi.

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Appellants argue that Examiner is attempting to show that chamber 3 is both the pistonphone volume and a high pressure adapter and that they cannot be both.

Examiner considers that to some degree they may be both. The instant invention includes:

- a high-pressure adapter that includes a quarter wave resonator tube and
- a pistonphone with an adjustable volume
- where the high pressure adapter is connected to the pistonphone output.

Examiner considers that Takashi shows this in the figure. Chamber 3 is an adjustable volume by virtue of the axial movement of body 2 within the body 1. The output of the sound produced by the pistonphone will pass through chamber 3 and out through hole 13 into the expanded and sealed opening at 12. The chamber 3 also has a length that may operate as a quarter wave resonator as any chamber may act as a resonator as a resonator is simply a chamber where the selected frequency may be amplified.

Appellants also argue (page 6 lines 1-16) Examiner's citation of *In re Hutchinson* in overcoming the limitation with respect to the "resonator having a length which is **adapted to** the excitation frequency of the pistonphone" is improper because the Hutchinson case is specifically addressed the preamble of a claim. Examiner maintains the rejection's reliance upon case law *In re Hutchison* is considered appropriate as at issue *In re Hutchison* was not the fact that the limitation following the phrase "adapted to" was in the preamble but the fact that the limitation followed the phrase "adapted to"

and did not constitute a limitation in any patentable sense. The limitation at issue in that case being in the preamble was immaterial to the decision.

Appellants further argue the *In re Venezia* decision held that "adapted to" functions as a limitation and that Examiner must consider those structural limitations that follow. Examiner agrees and Examiner did consider the limitations. However, Examiner continues to maintain that the resonator having a length which is "adapted to the excitation frequency of the pistonphone" does not serve to further limit the structure beyond a requirement that resonator have a length which Takashi discloses. Moreover, the Takashi length is adjustable so it is adaptable in the manner of the intended use of the device in the instant invention for a range of frequencies.

Finally, Appellants argue (page 6 lines 17-22) Takashi does not disclose that the amplifier adapter has an expanded opening for a sound proof connection to the microphone to be calibrated and "Takashi is not a high pressure adapter because the chamber 3 is that portion which is required to form the pistonphone so it cannot be both the pistonphone volume and the adapter connected to the pistonphone.

Examiner maintains that bodies 1 and 2 of Takashi include all the portions of a "high-pressure adapter" claimed by Appellants. Chamber 3 is a tube-like formation within the bodies serving to inherently function as a resonator as a resonator is simply a chamber that may amplify sound by its length. Mount 12 is an expanded opening in the body 2 and serves the intended use of providing an airtight (therefore to some degree sound proof at least in the same manner as disclosed by Appellant) to the microphone M to be calibrated. As previously stated, the bodies 1, 2 with chamber 3 are indeed to



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some extent both the pistonphone volume and adapter connected to the pistonphone. Likewise, one could make the argument that Appellants invention shown in figure 1 of the disclosure having a continuous volume at items 5 and 6 are both a pistonphone volume and adapter connected to the pistonphone.

From page 8 line 22 to page 7 line 3, Appellant recite features of the instant invention but provide not argument against the prima facie case presented by the Examiner so no answer is presented in reply.

Appellants also state that Examiner's reliance on Barham as a secondary reference in rejection under 35 USC § 103 adds nothing towards meeting the claimed limitations. However, Examiner considers this was necessary to teach a pistonphone capable of selected excitation frequencies, which was not expressly, nor in Examiner's view inherently, disclosed by Takashi.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "Charles Garber", with a stylized flourish at the end.


**CHARLES GARBER  
PRIMARY EXAMINER**

cdg  
December 13, 2004

Conferees

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